

I Claim:

1. A computerized method for estimating material and labor costs of a construction project comprising:

maintaining a first database of items and cost data associated with each of the items;

grouping one or more of the items from the first database to define predetermined sets of items, each of said predetermined sets of items corresponding to a desired installation of the grouped items;

selecting one or more of the sets of grouped items based on the construction project; and

calculating the estimated cost of the construction project based at least in part upon the cost data associated with the items in the selected set of grouped items.

2. The computerized method of claim 1 further comprising:

maintaining a second database of graphical representations, each of said graphical representations corresponding to one of the sets of grouped items; and

displaying the graphical representation of at least one set of grouped items upon selection.

3. The computerized method of claim 2 further comprising identifying sizes and quantities of the grouped items from the displayed graphical representation.

4. The computerized method of claim 2, wherein the the graphical representation of the grouped items is displayed and dimensions of hook-up materials are defined by entering dimension units of measure in data boxes associated with the graphical representation of the grouped items.

5. The computerized method of claim 1 wherein the grouped items are selected from the group consisting of heating, ventilation, and air conditioning equipment and associated hook-up materials; plumbing fixtures, equipment, foundry, structural supports, and associated hook-up materials; and electrical fixtures, equipment, and associated hook-up materials.

6. The computerized method of claim 5 wherein the length and size of associated hook-up materials are defined at the time the grouped items are selected.

7. The computerized method of claim 1, wherein the grouped items comprises at least two fixtures or equipment connected together with coupling materials.

8. The computerized method of claim 7, wherein the size of the coupling materials is calculated based at least in part upon stored building code and available coupling material size.

9. The computerized method of claim 8, wherein the calculated size of coupling materials may be manually overridden by a user.

10. In a computer system having a processor, a graphical user interface including a computer display, and an input device, a method for estimating material and labor costs of a construction project comprising:

5       maintaining a first database of items and cost data associated with each of the items;

          grouping one or more of the items from the first database to define predetermined sets of grouped items, each of said predetermined sets of grouped items corresponding to a desired installation of the construction project;

          displaying a Take Off Sheet data entry screen on the computer display comprising quantity data cells corresponding to item size;

          entering one or more of the sets of grouped items onto said Take Off Sheet data entry screen based on the construction project; and

          calculating the estimated cost of the construction project based at least in part upon the cost data associated with the items in the selected set of grouped items.

20   11. The method of claim 10, wherein the selected grouped items is selected from the group consisting of heating, ventilation, and air conditioning equipment and associated hook-up materials; plumbing fixtures, equipment, foundry, structural supports, and associated hook-up materials;

25   electrical fixtures, equipment, and associated hook-up materials; industrial process equipment and associated hook-up materials; and fire protection equipment and associated hook-up materials.

12. The method of claim 11, wherein the set of grouped items are grouped together according to a graphical representation of the grouped items.

13. The method of 12, further comprising identifying sizes and quantities of the grouped items from the displayed graphical representation.

14. The method of claim 12, wherein dimensions of grouped items are identified on the graphical representation of the grouped items and stored to a database of pre-defined grouped items.

15. The method of 14, wherein the dimensions of hook-up materials are defined by entering dimension units of measure in data boxes associated with the graphical representation of the grouped items.

16. The method of claim 15, wherein the graphical representation of the grouped items is displayed to the computer display prior to being entered onto said Take Off Sheet data entry screen.

17. The method of claim 10, wherein the items comprising the pre-defined grouped items are modified prior to being entered onto said Take Off Sheet data entry screen.

18. The method of claim 17, wherein the modified grouped items are stored to the database of pre-defined grouped items.

19. The method of claim 12, wherein two or more sets of grouped items are combined to form a combined set of grouped items.

20. The method of claim 19, wherein dimensions of the combined set of grouped items are identified on the graphical representation of the combined grouped items and stored to a database of pre-defined grouped items.

21. The method of claim 19, wherein the sets of grouped items comprise at least two fixtures or equipment that are connected together with coupling materials.

22. The method of claim 19, wherein the coupling material size is calculated by the processor based at least in part according to code requirements.

23. The method of claim 22, wherein the code requirements are selected from the group consisting of building codes, plumbing codes, engineering codes, and governmental codes.

24. An automated system for estimating a cost of selected equipment for a construction project comprising:

- a. an first database containing construction items and material and labor cost data associated with each of the items;
- b. a second database containing one or more of the items from the first database that define predetermined sets of grouped items, each of said predetermined sets of

grouped items corresponding to a desired installation of the grouped items in the construction project; and

c. a computer executing a cost estimating software program and accessing the second database for users to select grouped items, said cost estimating software program retrieving information from the second database, and providing a cost estimate of the construction project based at least in part upon the selected grouped items data.

25. The automated cost estimating system of claim 24 further comprising graphical illustrations of grouped items wherein the computer executing a cost estimating software program displays graphical illustrations of the selected grouped items.

26. The automated cost estimating system of claim 24 wherein the items and sets of grouped items are stored in a common database.

27. The automated cost estimating system of claim 24 wherein the software program provides a series of instructions that prompt a user to enter appropriate estimate data.

28. The automated cost estimating system of claim 24 wherein the software program estimates construction project costs for selected grouped items and hook-up materials and automatically includes associated equipment and hardware related to the selected grouped items and hook-up materials.

29. The automated cost estimating system of claim 28, wherein the associated equipment and hardware related to the selected grouped items and hook-up materials is defined by a user.

30. A computerized system for estimating the material and labor costs of a construction project comprising:

a remote server on a communications network managing software programs and databases;

5 a central database associated with the remote server, said central database storing construction material specifications and graphics, labor cost data, and material pricing data; and

10 a local computer on the communications network executing a material and labor cost estimating program, accessing data from the central database for use by the material and labor cost estimating program, and generating one or more reports for material and labor cost estimates for the construction project.